

## CLAIMS:

sub c' 1. A method of embedding auxiliary data (XD) in an information signal (MP), comprising the step of modifying selected signal samples so as to represent respective symbols of said auxiliary data, characterized in that said signal samples are transform coefficients ( $c(i,j)$ ) obtained by transform coding the information signal and encoded into variable-length code words, the method further comprising the steps of:

- decoding a variable-length code word indicative of a selected coefficient;
- modifying said selected coefficient so as to represent an auxiliary data symbol;
- encoding the modified coefficient into a new variable-length code word; and
- replacing the old code word by the new code word.

2. A method as claimed in claim 1, wherein said step of replacing the old code word by a new code word is omitted if said replacing causes the length of a given sequence of code words to substantially exceed the original length of said sequence.

3. A method as claimed in claim 1, further including a step of inserting dummy bits in a field provided by the format according to which the signal has been coded, if said replacing causes the length of a given sequence of code words to substantially fall short of the length of the original sequence.

4. A method as claimed in claim 2, wherein the auxiliary data includes data words each represented by plural combinations of data symbols.

Sub A 5. A method as claimed in claim 2 or 3, wherein said given sequence is a slice of an MPEG video signal.

6. A method as claimed in claim 2 or 3, wherein said given sequence is a transport packet of an MPEG transport stream.

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7. A method as claimed in claim 2 or 3, wherein said given sequence is the sequence of code words between clock reference time stamps which are accommodated in the signal.

5 8. A method as claimed in claim 1, wherein the selected coefficient is a differential DC coefficient representing the difference between DC coefficients of successive blocks of coefficients.

9. A method as claimed in claim 8, wherein the step of modifying the selected  
10 coefficient comprises adding such a value that the sum of differential DC coefficients of a given series of blocks is not substantially modified.

10. A method as claimed in claim 8, wherein the series of blocks is a slice of an  
MPEG video signal.

11. A method as claimed in claim 1, wherein said data symbols are represented by  
modulo-n values of the selected coefficients, where n is a predetermined integer.

12. A method as claimed in claim 11, wherein  $n=2$ .

13. A method of retrieving auxiliary data from an information signal, comprising  
the step of retrieving symbols of said auxiliary data from respective selected signal samples,  
characterized in that said signal samples are transform coefficients obtained by transform  
coding the information signal, modified so as to represent said symbols, and encoded into  
variable-length code words, the retrieving step comprising the steps of:

- decoding variable-length code words indicative of selected coefficients;
- retrieving each auxiliary data symbol from said decoded coefficients.

14. A method as claimed in claim 13, wherein plural combinations of data symbols  
30 represent the same data word.

15. A method as claimed in claim 13, wherein said data symbols are represented by  
modulo-n values of the selected coefficients, where n is a predetermined integer.

16. A method of recording an information signal on a storage medium, comprising the steps of:

- receiving a compressed information signal having signal samples in the form of transform coefficients obtained by transform coding the information signal and encoded into variable-length code words;
- embedding auxiliary data in said information signal, using a method as claimed in claim 1;
- recording said information signal with embedded auxiliary data on said storage medium.

17. An arrangement for embedding auxiliary data in an information signal, comprising means for modifying selected signal samples so as to represent respective symbols of said auxiliary data, characterized in that said signal samples are transform coefficients obtained by transform coding the information signal and encoded into variable-length code words, the arrangement further comprising:

- means for decoding a variable-length code word indicative of a selected coefficient;
- means for modifying said selected coefficient so as to represent an auxiliary data symbol;
- means for encoding the modified coefficient into a new variable-length code word; and
- means for replacing the old code word by the new code word.

18. An arrangement for retrieving auxiliary data from an information signal, comprising means for retrieving symbols of said auxiliary data from respective selected signal samples, characterized in that said signal samples are transform coefficients obtained by transform coding the information signal, modified so as to represent said symbols, and encoded into variable-length code words, the retrieving means comprising:

- means for decoding variable-length code words indicative of selected coefficients;
- means for retrieving each auxiliary data symbol from said decoded coefficients.

19. An arrangement for recording an information signal on a storage medium, comprising:

- means for receiving a compressed information signal having signal samples in the form of transform coefficients obtained by transform coding the information signal and encoded into variable-length code words;
- means for embedding auxiliary data in said information signal, using an arrangement as claimed in claim 17;

- means for recording ~~said information signal with embedded auxiliary data on said storage medium.~~

20. ~~SUB 31~~ An information signal with embedded auxiliary data, respective symbols of said auxiliary data being represented by selected signal samples, characterized in that said signal samples are transform coefficients obtained by transform coding the information signal and encoded into variable-length code words.

21. A storage medium having stored ~~thereon an information signal with embedded auxiliary data as claimed in claim 20.~~